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Irish Standard
I.S. EN 16157-4:2021

Intelligent transport systems - DATEX II
data exchange specifications for traffic
management and information - Part 4:
VMS publication

I.S. EN 16157-4:2021

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National Foreword

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EUROPEAN STANDARD

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English Version

**Intelligent transport systems - DATEX II data exchange
specifications for traffic management and information -
Part 4: VMS publication**

Intelligente Verkehrssysteme - DATEX II
Datenaustausch Spezifikation für
Verkehrsmanagement und Information - Teil 4:
Veröffentlichungen Variable Verkehrszeichen (VMS)

This European Standard was approved by CEN on 4 January 2021.

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European foreword

This document (EN 16157-4:2021) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2021, and conflicting national standards shall be withdrawn at the latest by September 2021.

This document supersedes CEN/TS 16157-4:2014.

The major differences introduced in the new edition of this document are:

- renaming of some classes (e.g. currently renamed *Vms*, *VmsController*, *VmsControllerStatus*, *VmsStatus*) to improve the understanding and the usage of the modelled information;
- merging of VMS characteristics and VMS configuration in a same model to address static and dynamic configuration as well as *VmsMessage* package restructured enhancing the model flexibility for inclusion of dynamic configured VMS, e.g. “Full-Matrix” VMS;
- Compliance to ISO 14823:2017 - Intelligent transport systems – Graphic data dictionary, for description of Pictogram graphical information;
- correction of several bugs.

This document - EN 16157-4 - is the fourth part of a multi-part standard under the general title *Intelligent transport systems - DATEX II data exchange specifications for traffic management and information*. A list of all parts in the CEN 16157 series can be found on the CEN website.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

This document defines a common set of data exchange specifications to support the vision of a seamless interoperable exchange of traffic and travel information across boundaries, including national, urban, interurban, road administrations, infrastructure providers and service providers. Standardization in this context is a vital constituent to ensure interoperability, reduction of risk, reduction of the cost base, promotion of open marketplaces and many social, economic and community benefits to be gained from more informed travellers, network managers and transport operators.

Delivering European Transport Policy in line with the White Paper issued by the European Commission requires co-ordination of traffic management and development of seamless pan European services. With the aim to support sustainable mobility in Europe, the European Commission has been supporting the development of information exchange mainly between the actors of the road traffic management domain for a number of years. In the road sector, DATEX II has been long in fruition, with the European Commission being fundamental to its development through an initial contract and subsequent co-funding through the Euro-Regional projects. With the standardization of DATEX II, there is a real basis for common exchange between the actors of the traffic and travel information sector.

This document includes the framework and context for exchanges, the modelling approach, data content, data structure and relationships. This European Standard supports a methodology that is extensible.

This document specifies the informational structures, relationships, roles, attributes and associated data types required for publishing variable message sign information within the DATEX II framework. It specifies the structures and definitions of information that can be exchanged to convey details of the messages displayed on variable message signs, the current configuration, characteristics and status of the variable message signs that are currently deployed on the road network.

This is specified in two publications, a DATEX II VMS Table Publication sub-model and a VMS Publication sub-model, which are part of the DATEX II platform independent model, but this document excludes those elements that relate to:

- location information which are specified in EN 16157-2
- common information elements, which are specified in EN 16157-7
- situation information which are specified in EN 16157-3.

The VMS Table Publication supports the occasional exchange of tables containing generally static reference information about deployed VMS which enable subsequent efficient references to be made to pre-defined static information relating to those VMS.

The VMS Publication supports the exchange of the graphic and textual content of one or several VMS plus any status information on device configuration that aid the comprehension of the informational content. This content is potentially subject to rapid change.

These publications are not intended to support the control or configuration of VMS equipment. Each is part of the DATEX II platform independent model.

1 Scope

This document is the fourth part of the DATEX II European Standard which deals with the publication sub-models within the DATEX II model that support the exchange of variable message sign information.

These publications are intended to support the exchange of status and informational content concerning VMS from the organization controlling the VMS to other organisations providing ITS services or onward information exchange. It is not intended to support the control or configuration of VMS equipment.

This is specified in two sub-models, a DATEX II VMS Table Publication sub-model and a DATEX II VMS Publication sub-model.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 16157-1:2018, *Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 1: Context and framework*

EN 16157-2:2019, *Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 2: Location referencing*

EN 16157-3:2018, *Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 3: Situation Publication*

EN 16157-7:2018, *Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 7: Common data elements*

EN ISO 14823:2017, *Intelligent transport systems - Graphic data dictionary (ISO 14823:2017)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16157-7:2018, EN 16157-2:2019 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org>

3.1

display area

physically or logically defined area of a VMS used to display a specific type of content -- instead of representing a specific type of content

EXAMPLE A pictogram display area is used for displaying a pictogram representing a road sign.

Note 1 to entry: Such areas can be defined permanently or allocated dynamically as for full-matrix VMS."

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